

Title (en)

Triple diffused short channel device structure.

Title (de)

Dreifach diffundierte Anordnung mit kurzem Kanal.

Title (fr)

Dispositif à canal court formé par triple diffusion.

Publication

EP 0083447 A2 19830713 (EN)

Application

EP 82112060 A 19821228

Priority

US 33560881 A 19811230

Abstract (en)

A short channel metal oxide semiconductor transistor device is processed without undesirable short channel effects, such as VT falloff and with a reasonable source-drain operating voltage support. In a substrate lightly doped with a P-type conductivity material and source and drain region heavily doped with an N-type conductivity material, two lightly doped N- regions are disposed between the edge of the gate and the source and drain regions. A channel region is more heavily doped with P-type material than the substrate. Two regions extend from opposite sides of the channel region to an area generally below the two N- regions and above the substrate, which regions are more heavily doped than the channel regions.

IPC 1-7

H01L 29/08; **H01L 29/10**; **H01L 29/88**; **H01L 21/265**

IPC 8 full level

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CPC (source: EP)

H01L 21/266 (2013.01); **H01L 29/1045** (2013.01); **H01L 29/1083** (2013.01); **H01L 29/6659** (2013.01); **H01L 29/66598** (2013.01); **H01L 29/78** (2013.01)

Cited by

US6548842B1; US6020227A; EP0514602A1; CN112133744A; EP0213983A3; US6078082A; US5401994A; US5244823A; EP0209166A1; US6127700A; GB2368456B; DE4121456A1; US6599804B2; US6797576B1; WO8803329A1; US8304835B2; US8735980B2; US6566204B1; US8410549B2; US6576966B1; US8084827B2; US8377768B2; US8163619B2; US8415752B2; US7595244B1; US7145191B1; US7700980B1; US7701005B1; US7879669B1

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